



# Missouri Department of Natural Resources

## PUBLIC NOTICE

### APPLICATION FOR MISSOURI STATE OPERATING PERMIT

DATE: August 18, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552, ATTN: G. Irene Crawford, Regional Director. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by October 18, 2006, or received in our office by 5:00 p.m. on October 21, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

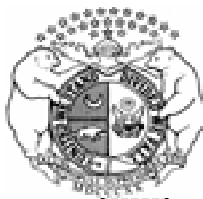
Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, <http://www.dnr.mo.gov/env/wpp/index.html>, or at the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, Missouri 63552.

Public Notice Date: August 18, 2006  
Permit Number: MO-0122106  
Northeast Regional Office

<b>FACILITY NAME AND ADDRESS</b>	<b>NAME AND ADDRESS OF OWNER</b>
Aqua Missouri, Big Sky Subdivision County Road 4031 Holts Summit, MO 65043	Aqua Missouri, Inc. P.O. Box 7017 Jefferson City, MO 65102
<b>RECEIVING STREAM &amp; LEGAL DESCRIPTION</b>	<b>TYPE OF DISCHARGE</b>
Unnamed tributary to Rivaux Creek (U) Rivaux Creek (C) (00731) Sec. 6, T44N, R10W, Callaway County	Domestic, modification to add chlorination and dechlorination

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No.

MO-0122106

Owner:

Aqua Missouri, Inc.

Address:

P.O. Box 7017, Jefferson City, MO 65102

Continuing Authority:

Same as above

Address:

Same as above

Facility Name:

Aqua Missouri, Big Sky Subdivision

Facility Address:

County Road 4031, Holts Summit, MO 65043

Legal Description:

NW ¼, NE ¼, Sec. 6, T44N, R10W, Callaway County

Latitude/Longitude:

+3837293/-09205401

Receiving Stream:

Unnamed tributary to Rivaux Creek (U)

First Classified Stream and ID:

Rivaux Creek (C) (00731)

USGS Basin & Sub-watershed No.:

(10300102-240004)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

Outfall #001 - Subdivision - SIC #4952

Septic tanks/extended aeration/chlorination/dechlorination/sludge disposal by land application or hauled by owner or contract hauler

Design population equivalent is 166.

Design flow is 12,488 gallons per day.

Actual flow is 3,300 gallons per day.

Design sludge production is 3.0 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

April 28, 2006

Effective Date

Revised

A handwritten signature in black ink, reading "Doyle Childers".

Doyle Childers, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

April 27, 2011

Expiration Date

MO 780-0041 (10-93)

G. Irene Crawford, Director, Northeast Regional Office

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 2 of 4	
					PERMIT NUMBER MO-0122106	
<p>The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on the date of issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:</p>						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/quarter**	24hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		45	30	once/quarter**	24hr. composite
Total Suspended Solids	mg/L		45	30	once/quarter**	24hr. composite
pH – Units	SU	***		***	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab
Fecal Coliform (Note 1)	#/100ml	1000		400	once/quarter**	grab
Total Residual Chlorine (Note 2)	mg/L	0.016		0.008	once/quarter**	grab
<p>MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u>; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.</p>						
<b>B. STANDARD CONDITIONS</b>						
<p>IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u>, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.</p>						

MO 780-0010 (8/91)

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS** (continued)

- \* Monitoring requirement only.
- \*\* Sample once per quarter in the months of March, June, September, and December.
- \*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

Note 1 – Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- (b) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.” If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit**.
- (d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 mg/L” TRC.

### C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.
  6. Water Quality Standards
    - (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
    - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      - (5) There shall be no significant human health hazard from incidental contact with the water;
      - (6) There shall be no acute toxicity to livestock or wildlife watering;
      - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

DRAFT

Date of Fact Sheet: August 9, 2006

Date of Public Notice: August 18, 2006

## NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0122106

FACILITY NAME: Aqua Missouri, Big Sky Subdivision WWTF

OWNER NAME: Aqua Missouri, Inc.

LOCATION: Sec. 6 T44N R10W County: Callaway

RECEIVING STREAM: Unnamed tributary to Rivaux Creek (C) (00731)

FACILITY CONTACT PERSON: Ms. Tena Hale-Rush

TELEPHONE: (573) 634-2699

### FACILITY DESCRIPTION

The wastewater treatment facility is composed of septic tanks at each home, followed by an extended aeration tank then clarifier. Disinfection is accomplished by chlorination then dechlorination. The sludge is disposed of by land application or it is hauled by the owner or a contract hauler. The design flow is 12,488 gallons per day.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, protection of aquatic life, and category B whole body contact recreation.

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations have been established under federal and state laws. This facility is receiving new effluent limits for Fecal Coliform and Total Residual Chlorine. The effluent limit rationales are below:

### **Derivation and Discussion of New Limits**

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration  
Cs = upstream concentration  
Qs = upstream flow  
Ce = effluent concentration  
Qe = effluent flow

- **Total Residual Chlorine** Protection of aquatic life, acute criteria 19 µg/L, chronic criteria 10 µg/L.

Chronic WLA:  $C_e = ((0.09 + 0.0)10 - (0.0 * 0.0))/0.09$

$C_e = 10 \text{ µg/L}$

Acute WLA:  $C_e = ((0.09 + 0.0)19 - (0.0 * 0.0))/0.09$

$C_e = 19 \text{ µg/L}$

$LTAc = 10 \text{ µg/L} (0.527) = 5.3 \text{ µg/L}$

[CV = 0.6, 99th Percentile, n = 4]

$LTAa = 19 \text{ µg/L} (0.321) = 6.1 \text{ µg/L}$

[CV = 0.6, 99th Percentile]

$MDL = 5.3 \text{ µg/L} * 3.11 = 16.5 \text{ µg/L}$

[CV = 0.6, 99th Percentile]

$AML = 5.3 \text{ µg/L} * 1.55 = 8.2 \text{ µg/L}$

[CV = 0.6, 95th Percentile, n = 4]

- **Fecal Coliform** facility is within 2 miles to a Whole Body Contact receiving stream, therefore wastewater must not contain more than a monthly geometric mean of 400 colonies per 100 milliliters and a daily maximum of 1000 colonies per 100 milliliters. [10 CSR 20-7.015(8)(B)4.A]

This permit will be issued for a period of five years.